

MAR 1952

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CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

COUNTRY USSR

SUBJECT Scientific - Astronomy, chemistry, geology,
mathematics, physicsDATE OF
INFORMATION 1951, 1953,
1954HOW
PUBLISHED Monthly periodicals

DATE DIST. 1 Feb 1955

WHERE
PUBLISHED Moscow

NO. OF PAGES 26

DATE
PUBLISHED Apr-Oct 1954

LANGUAGE Russian

SUPPLEMENT TO
REPORT NO.

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ABSTRACTS OF ARTICLES FROM UNAVAILABLE
SOVIET SCIENTIFIC AND TECHNICAL PERIODICALS (7)

[Comment: This report presents abstracts taken from issues of the
Soviet periodical Referativnyy Zhurnal published April-October 1954.
These abstracts are of articles originally published in Soviet scien-
tific and technical serial publications which are not known to be avail-
able outside the Soviet Orbit.

The following form is used for each abstract in this report:

General subject, specific subject (Soviet abstract number)
Name of unavailable periodical, volume and/or issue number,
date, pages
Author of article
Title of article (Language, if other than Russian)
Abridgment of abstract (Source)

The sources, indicated in parentheses at the end of each abstract,
are abbreviated as follows:

RZhAstr Moscow, Referativnyy Zhurnal -- Astronomiya i Geodeziya
RZhFiz Moscow, Referativnyy Zhurnal -- Fizika
RZhKhim Moscow, Referativnyy Zhurnal -- Khimiya
RZhMat Moscow, Referativnyy Zhurnal -- Matematika
RZhGeol Moscow, Referativnyy Zhurnal -- Geologiya i Geografiya

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I. ASTRONOMY AND GEODESY

Astrometry, Motion of Poles and Latitude Service (5146)
Byul. Astronom. Observ. Im. Engelgardta, No 30, 1953, pp 17-40
 Chudovicheva, N. A. and Ivanova, A. K.
 Observations of the Latitude Variation of the Engelhardt Astronomical
 Observatory According to the New 1951 Program

Results of observations of latitude variations of the Engelhardt
 Astronomical Observatory are presented. These observations were carried out
 in 1951 using the Bamberg zenith telescope and on a program analogous to that
 of Poltava. These results are in good agreement with the International Lat-
 itude Service. (RZhAstr, No 10, 1954)

Astrometry, Time and Latitude Service (5149)
Uch. Zap. Vyssh. Arkt. Mor. Uchilishcha, No 4, 1953, pp 69-90
 Shostak, M. G.
 Comparative Evaluation of Accuracy and the Relative Advantage of Various Methods
 of Time and Latitude Determination (by Means of the Transit Instrument)

Various methods used for determining the time gave the same mean-square
 errors for correction of the chronometer. A similar conclusion was reached
 in determination of latitude by means of absolute zenith distances. Observa-
 tions were processed in Leningrad using the Bamberg transit instrument.
 (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5163)
Peremennyye Zvezdy, No 6, 1953, pp 407, 408
 Kukarkina, N. P.
 Variable Star BD 60° 2613

The brightness of the star was studied on the plates of Moscow Observatory
 and it was established that BD 60° 2613 is a binary, the components 40" apart
 and both variable. Stellar magnitude of reference stars, map of surrounding
 and observations of brightness of the components are presented. (RZhAstr,
 No 10, 1954)

Astrophysics, Observations of Variables (5164)
Peremennyye Zvezdy, No 6, 1953, pp 408, 409
 Kholopov, P. N.
 SFZ 919 Persei

Evaluations of Moscow Observatory plates revealed that the star does not
 have a short period as previously thought. The possibility of a period of 150
 to 620 days and the classification to semiregular variables is envisaged.
 (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5165)
Peremennyye Zvezdy, No 6, 1953, pp 409-411
 Kholopov, P. N.
 Cepheid III Cygni

Results of 35 observations on plates of Moscow Observatory are evaluated.
 The light curve, reference stars, and map of surrounding are included.
 (RZhAstr, No 10, 1954)

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Astrophysics, Observations of Variables (5166)
Peremennyye Zvezdy, No 6, 1953, pp 411, 412
 Kukarkina, N. P.
 BV Cassiopeiae

The elements of the star were corrected using the Moscow Observatory plates. The mean light curve, reference stars, and the map of surroundings are presented (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5167)
Peremennyye Zvezdy, No 6, 1953, pp 412-414
 Fedorovich, V. P.
 Cepheid FI Cassiopeiae

The elements of the star were determined using the plates of Moscow Observatory. The brightness was found to vary between $13.7-14^m.0$. The mean light curve, reference stars, and the map of surroundings are included. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5168)
Peremennyye Zvezdy, No 6, 1953, pp. 414, 415
 Perova, N. B.
 KZP 5506 Cygni

The variation of brightness of the star was evaluated using 163 plates. The brightness was found to vary between $13.6-14^m.8$. The mean light curve, reference stars, and the map of surroundings are included. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5169)
Peremennyye Zvezdy, No 6, 1953, pp 415, 416
 Perova, N. B.
 DO Cygni

The variation of brightness of the star was evaluated from 269 plates using also 13 minima determined by Hoffmeister. The previously computed period and elements were corrected. Reference stars, map of surroundings, 7 observed minima and their deviations from those previously observed are included. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5170)
Peremennyye Zvezdy, No 6, 1953, pp 417, 418
 Fedorovich, V. P.
 AY Cassiopeiae

Corrected elements of the star are found from 60 brightness evaluations by the Moscow Observatory. The brightness was found to vary between $12.44-13^m.38$. The mean light curve, reference stars, and the map of surroundings are included (RZhAstr, No 10, 1954)

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Astrophysics, Observations of Variables (5171)
Peremennyye Zvezdy, No 1, 1954, pp 21-35
 Slovokhotova, N. P.

Eclipsing Variables SW Cygni and TW Draconis and the Laws of Their Period
 Variations.

The variation of the period of SW Cyg is found to be due to a third body. The elements of TW Dra are corrected, but the number of observations is found to be insufficient for further conclusions. The light curves, maps of surroundings, and table of observations by the author are included. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5172)
Peremennyye Zvezdy, No 1, 1954, pp 36-51
 Zakharov, G. P.

Visual Observations of Variable Stars

Visual observations of the following 14 variables are presented: U, SZ, UW, XX, AQ, AX Sagittarii; R, S, Z, RU, RW Scuti; W, X, Y Serpents. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5174)
Peremennyy Zvezdy, No 1, 1954, pp 55-57
 Snarov, A. S.

Newly Discovered Variable Star BD 67° 922-SPZ 1155 Draconis

Emission lines in the star's spectrum revealed the possibility of brightness variation. This variation was found to be between 9.4-11^m.3 using 30 plates. The spectrum is of the type RW Aurigae, but the type of variation could not be classified. The star sharply defies established laws and further observations are desirable. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5173)
Peremennyye Zvezdy, No 1, 1954, pp 52-54
 Semakin, N. K.

Visual Observations of Variable Stars in 1949 and 1950

Observations of 17 variables in 1949 and 1950 using a 6-power binocular are presented. (RZhAstr. No 10, 1954)

Astrophysics, Observations of Variables (5175)
Peremennyye Zvezdy, No 1, 1954, pp 57-59
 Kukarkina, N. P.

Processing of Observations of SU Cassiopeiae by Hertzsprung's Method

The elements of the star were corrected by processing the observations. The standard curve is plotted using Gruuvel's and Walter's photoelectric observations. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5176)
Peremennyye Zvezdy, No 1, 1954, pp 60-63
 Lavrov, M. I.
 SW Andromeda

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A total of 185 brightness evaluations of the star were obtained at the Engelhardt Astronomical Observatory on the 162 mm comet searcher. The observations are in agreement with those of Azarnova and of Yankina. The mean light curve, reference stars, and the map of surroundings are included. (RZhAstr, No 10, 1954)

Astrophysics, Observations of Variables (5177)
Peremennyye Zvezdy, No 1, 1954, pp 63-65
 Semakin, N. E.
 Photographic Observations of TV Camelopardis

The brightness of TV Cam was evaluated from 134 plates of the Moscow Observatory. The mean light curve was plotted using B. V. Lukarkin's elements. The variation of brightness was found between 11.72-13^m.45. Reference stars and map of surroundings are included. (RZhAstr, No 10, 1954)

Theoretical Astrophysics, Diffuse Nebulae (5219)
Izv. Krymsk. Astrofiz. Observ., No 11, 1954, pp 34-35
 Pikelner, S. B.
 Method for Studying Turbulence from Fluctuations of Brightness in Nebulae

Formulas are derived and those by A. M. Obukhov and A. M. Yaglom used in order to find pressure and turbulent energy of nebulae. It is assumed that the radiative energy in volume unit of the nebulae, with abundance of ionized hydrogen, is approximately proportional to the square of pressure at constant temperature. (RZhAstr, No 10, 1954)

The Sun, General Problems (5243)
Izv. Krymsk. Astrofiz. Observ., No 11, 1954, pp 129-151
 Severnyy, A. B.
 Magnetohydrodynamic Phenomena on the Solar Surface

Clarification of motion of big masses of neutral plasma along lines of forces in the magnetic field is attempted by using equations of magnetohydrodynamics and by assuming some simplifications. The analysis of these equations shows approximate agreement with velocities and accelerations observed in prominences. (RZhAstr, No 10, 1954)

Geodesy, Aerial Survey and Photogrammetry (5362)
Sb. Statey po Geodezii, No 6, 1954, pp 55, 60
 Uspenskiy, A. N.
 Preparation of Diapositives for a Single Projector

Methods of improving accuracy in the use of small dimension negatives (diapositives) and a better way of their preparing them are described. Suggestions are made by Z. V. Burmistrova, I. G. Kuderskiy, S. N. Safronov. Author finds suggestions by Z. V. Burmistrova the most advantageous. (RZhAstr, No 10, 1954)

Geodesy, Aerial Photography and Photogrammetry (5365)
Sb. Statey po Geodezii, No 6, 1954, pp 3-17
 Nuzhnyy, A. S.
 Innovations in Certain Processes of Differentiation Method of TAVINGA : K
 (Central Scientific Research Institute of Geodesy, Aerial Photography and Cartography)

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Problems related to improving accuracy in computation of errors of longitudinal parallaxes, in solving problems connected with the mutual orientation of pictures and in the establishment of angles at the base are analyzed. Hope is expressed that his suggestion will be helpful in the application of differentiating methods of the TsNIKA i K. (RZhAstr, No 10, 1954)

II. CHEMISTRY

Chemistry: Analytical (25740)
 Izv. AN Turkm. SSR, No 5, 1953, (63,04)
 Starodubets, I. S.

The Application of the Chromatographic Technique to Luminescence-Capillary Analysis of Crude Oils and Asphalts

Recommends saturating the filter paper with a solution of H_2SiO_3 in the luminescence-capillary analysis of crude oils and asphalts to determine chromatographically the groups of components in the asphalts and crude oils. (RZhKhim, No 5, 1954)

Chemistry: Analytical (25777)
 Izv. Vsesoyuznaya s.-kh. akademii, No 3, 1953, (229,230)
 Kopyeva, Z. P.

Modification of the Method for Determining the Exchange Acidity of Soils

Instead of using 100 grams of soil, 1 N KCl, and titrating with 0.1 N NaOH, the method has been modified to using only half as much soil, reducing the volume for titrating by about 10 times, and using only 0.5 N KCl. (RZhKhim, No 5, 1954)

Chemistry: Apparatus (25818)
 Izv. AN Azerb. SSR, No 7, 1953, (39-44)
 Khalilov, Kh. M.

Mercuryless Apparatus for the Investigation of Volumetric Properties of Stratified and Recombined Petroleum and Gases

Describes construction and operation of the apparatus. (RZhKhim, No 5, 1954)

Chemistry: Biochemistry (25711)
 Vopr. Med. Khimii, No 6, 1953, pp 125-132
 Pererostnikov, E. A.

Quantitative Amount of Histones in the Cell Nuclei of Tumors in Normal Organs and in Embryo Organs

Malignant tumors have a smaller amount of histones in the cell nuclei than normal tissues have in their nuclei. The nuclei of embryo organs contain more histones than the nuclei of normal tissues. (RZhKhim, No 6, 1954)

Chemistry: Biochemistry (25403)
 Izv. IA Priem. SSR, No 3, 1953, pp 14-19
 Mosov, A. E.

Enzymatic Characteristics of the Development of Buds in Fruit Trees

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Studied the sugar conversions in the buds of a number of fruit trees. Also investigated the effect of light on the development of the buds. (RZhKhim, No 9, 1954)

Chemistry: Biochemistry (25484)
Dokl. AN Uzb. SSR, No 7, 1953 (39-44)
Naaber, L. Kh.

Direction of Activity of Invertase in the Leaves of the Cotton Plant

Investigated the direction of synthesis and decomposition of sugars in the leaves of the cotton plant during ripening and blooming. (RZhKhim, No 9, 1954)

Chemistry: Biochemistry (25486)
Dokl. AN Uzb. SSR, No 9, 1953, (22,23)
Usmanov, Kh. U., Dulova, V. I., Tillayev, R., and Vvedenskaya, L. A.
Assimilation of Carbonates by Cotton-Plant Leaves

Immersed the leaves of a cotton plant into a solution of sodium carbonate containing C^{14} and measured the radioactivity in various parts of the plant. (RZhKhim, No 9, 1954)

Chemistry: Biochemistry (25539)
Izv. AN Arm. SSR, Biol. is.-kh.n., Vol 6, No 5, 1953 (45-50)
Bunyatyán, G. Kh., and Organesyan, A. S.
The Relationship Between the Removal of Phosphates and Glucose With Urine

On intravenous injection of glucose, a decrease in the phosphate content of urine was detected in dogs. Two hours later, the phosphate content returns to normal. (RZhKhim, No 9, 1954)

Chemistry: Corrosion (26519)
Izv. AN Azerb. SSR, No 8, 1953 (3-14)
Negreyev, V. F., Mamedov, I. A., and Alekperova, R. Yu.
Electrochemical Investigation of the Durability of Lacquer-Paint Coatings Under Marine Conditions

A coating consisting of aluminum powder and certain lacquers when applied with heat was found to be highly resistant to marine corrosion if a perchlorovinyl resin is added. (RZhKhim, No 9, 1954)

Chemistry: Fuels (26150)
Izv. AN Azerb. SSR, No 9, 1953, (17-20)
Dadashev, B. A.
Investigating the Catalytic Activity of Molybdenum-Aluminum Catalyst in the Aromatization Reaction of Gasoline

Optimum conditions were found to be at 52-53°C degrees, volume rate of 0.35 liters of catalyst per hour. Yield was 70.5% of crude. (RZhKhim, No 8, 1954)

Chemistry: Kinetics (25239)
Vest, AN Beloruss. SSR, No 1, 1953, 71-70
Byal'kevich, P. I.
The Nature of Self-Acceleration in Reactions with Solid Substances

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The most probable reason for self-acceleration in decomposition reactions of solids is the autocatalytic action of the reaction products. (RZhKhim, No 8, 1954)

Chemistry: Metallurgy (24215)

Vopr. Fiz. Metallov i Metallovedeniya, AN UkrSSR, No 4, 1953, 49-54

Dekhtyar, I. Ya., and Kumok, I. M.

Concerning the Oxidation Mechanism of Alloys

Studied the kinetics of the growth of the oxide layer of nickel-manganese alloys, and found it follows a parabolic curve. (RZhKhim, No 8, 1954)

Chemistry: Petroleum Products (24392)

Zhil.-Komm. Kh.-vo, No 4, 1953, 25, 26

Boguslavskiy, A.

Ways of Increasing the Quality of Asphalt-Concrete Coverings

Found that it is expedient to use soft asphalts for asphalt-concrete coverings. Coverings on a base of soft asphalt are firmer. (RZhKhim, No 8, 1954)

III. GEOLOGY AND GEOGRAPHY

Asia Outside of USSR, China (2338)

Narodnyy Kitay, No 1, 1954, pp 9-13

Lyu Chun' [Liu Ch'un]

Successful Realization of the Policy of Local National Autonomy in the People's Republic of China.

The author discusses the position of national minorities in China. He states that 50 national autonomous regions have been created, the most important of which he enumerates. (RZhGeol, No 2, 1954)

Asia Outside of USSR, Korea (2356)

Novaya Koreya, No 4, 1954, pp 25-27

Kim Yer [Kim Yol]

Restoration and Development of Heavy Industry in Our Country [Korea]

An article by the vice-minister of heavy industry of Democratic People's Republic of Korea. In 1952 the extraction of useful minerals exceeded the level of 1948 by 106.8%; the prewar level in all other branches of industry has been exceeded. He notes that increased efforts will be made to extract the most important metals (copper, lead, zinc, wolfram, molybdenum, iron ores). Special emphasis is being given the metallurgical industries. (RZhGeol, No 2 1954)

Biogeography, Phytogeography (2153)

Izv. AN Uzb. SSR, No 3, 1953, pp 50-58

Zakirov, K. Z., and Granitov, I. I.

Role of Man in Change of Plant Life of Central Asia

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Analysis of historical information shows that in the mountains of Uzbek SSR even in the 19th century there were extensive forests, mainly forests locally called "archevniki" (juniper groves). Man contributed to the change in forest formations by excessive cutting. The authors consider the best measure now is the establishing of forest plantings in the mountains on the denude slopes, to counter erosion. (RZhGeol, No 2, 1954)

Cartography, General (1932)
Voyennyy Vestnik, No 16, 1953, pp 18-27
 Kudryavtsev, M.
 Soviet Topographical Maps, the Best in the World

[No abstract.] (RZhGeol, No 2, 1954)

Cartography, General (1933)
Tr. Mosk. in-ta inzhenerov geodezii, aerofoto i kartografii, No 17, 1953,
 67-71
 Troitskiy, L. S.
 New Conditional Symbols for Topographic Maps

The author discusses the conditional symbols, which came out in 1951, for topographic maps of scale 1:25,000 to 1:100,000 and 1:10,000. He notes that of greatest interest is the rejection of the representation on topographic maps of zonal geographic concepts (e. g. tundra, steppe, semidesert) and the transition to the representation of concrete types of plant life (e.g., moss, lichen, desert-type, steppe-type). He also notes the lack of completeness in representation of tundra types. (RZhGeol, No 2, 1954)

Deposits of Nonmetal Ores, Clays (1743)
Vestn. AN Kaz. SSR, No 9, 1953, pp 101-103
 Kulagin, S. K., and Barbot-de-Marni, A. V.
 Foundry Clays from the Region of Dzhezkazgan

Described are the marine paleogene deposits with foundry-type clays from the region of Dzhezkazgan. These clays are observed among quaternary deposits in the form of small mounds 10-20 cm in cross section and relative elevation of 1-2 m. Under the microscope all the varieties of the clays are seen to possess a fine dispersive structure and to differ in their content of Fe_2O_3 . (RZhGeol, No 2, 1954)

Deposits of Nonmetal Ores, Oil and Natural Gases (1600)
Izv. AN Azerb. SSR, No 9, 1953, pp 29-51 (Azerbaijdzhani resume)
 Potapov, I. I.
 Problem of the Formation of Petroleum Layers

The author considers the various theories of the origin of petroleum and of the formation of petroleum beds. He notes that the organic migration theory is correct in principle but requires further refinement and changes. In particular he treats the formation of the Apsheron petroleum beds, about which he arrives at three fundamental conclusions (i.e., bacterial decomposition of organic substances to oil; interaction of water and minerals with hydrocarbons; migration of hydrocarbons in the gaseous phase.) (RZhGeol, No 2, 1954)

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Deposits of Useful Minerals, Ferrous Ores (1697)
Vestn. AN Kaz. SSR, No 9, 1953, pp 103-106
 Labrov, V. V.

Morphogenetic Classification of the Oligocene Iron Ores of the Continental Valley Type

In the middle oligocene continental valley strata of accumulative lowlands of Kazakhstan Outer Urals use is made, from the regional distribution, of iron ores consisting of complex hydrogoethite-siderite-leptochlorite composition with oolitic structure, in contrast to the estuarial and delta oolitic iron ores of the Northern Priurals. (RZhGeol, No 2, 1954)

Deposits of Useful Minerals, Ferrous Ores (1705)
Metsniyereba da tekhnika, No 6, 1953, pp 16-21 (Georgian)
 Gavasheli, A.

Chiatur Manganese, its Past, Present and Future Prospects

[No abstract.] (RZhGeol, No 2, 1954)

Deposits of Useful Minerals, Ferrous Ores (1706)
Izv. AN Azerb. SSR, No 12, 1953, pp 79-87 (Azerbaijani resume)
 Khalilova, T. A.

Mineralogical Composition and Ore Types of the Ferro-Manganese Deposits in Khanlarskiy Rayon

The author describes the ores found in the Molladzhal and Elvor iron-manganese deposits. On the basis of the chemical and mineralogical composition and also textural peculiarities he differentiates manganese, ferro-manganese, and manganese-ferrous ores, among which are encountered also iron ores. Described are pyrolustite-psilomelane varieties of the ores. (RZhGeol, No 2, 1954)

Deposits of Useful Minerals, Nonferrous Ores (1714)
Izv. AN Kaz. SSR, Ser. geol, 124, No 17, 1953, pp 105-115
 Veyts, B. I.

Genetic Connection of the Polymetallic Mineralization of Rudnyy Altay with the Devonian Vulcanism

The polymetallic mineralization is coordinate with the Rudnyy Altay zone complicated by effusive-sedimentary formations of the middle and upper Devonian. The polymetallic deposits with preponderance of Pb and Zn are coordinate with the zone of development of effusives and tuffas of acidic composition, but the cupro-pyritic strata and deposits with preponderance of Cu and Zn are coordinate with the regions of development of more basic effusives. (RZhGeol, No 2, 1954)

Deposits of Use Minerals, Ore Formation (1675)
Nauka i zhittya, No 2, 1954, pp 20-22 (Ukrainian)
 Rodionov, S. P.

How the Mineral Wealth of the Ukraine Came About

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The author expounds the conditions governing the formation of deposits of mineral wealth of the Ukraine during various geological epochs: in the archaic and proterozoic eras, deposits of graphite, structural and decorative materials (granites, labradorites); in the paleozoic, numerous deposits of kaolin, coal, (Donbass), salts, gypsum, dolomites (Artemovskaya basin); in the mesozoic, deposits of phosphorites, refractory clays, marls, chalk; in the cenozoic, deposits of manganese (Nikopol'skoye), lignite, oil (in Carpathia). (RZhGeol, No 2, 1954)

Engineering Geology, Engineering-Geological Study of Natural Processes (1867)
Materialy po inzh. geologii, No 4, 1953, pp 87-132
 Kriger, N. I.

Engineering Seismotectonics and Problems of Recent Tectonic Movements

On the example of numerous works the author definitely establishes the limited value of our knowledge of the relation between earthquakes and recent tectonic movements; therefore, microseismic regional classifications based on tectonic data cannot at present be accepted. He proposes two methods: instrumental and geologico-geomorphological. Special attention is given to the second method in the study of river and marine terraces. (RZhGeol, No 2, 1954)

Experimental Mineralogy and Petrography, General (1644)
Izv. AN Kaz. SSR, ser. geol., 124, No 17, 1953, pp 177, 178
 Avetisyan, Kh. K.

Application of Gibbs' Phase Rule to Mineral Associations

[No abstract] (RZhGeol, No 2, 1954)

Experimental Mineralogy and Petrography, General (1645)
Izv. AN Kaz. SSR, ser. geol., 124, No 17, 1953, pp 176
 Avetisyan, Kh. G.

Influence of Pressure on the Critical Points of Liquids, and Treatment of the Problem in Geochemistry

[No abstract.] (RZhGeol, No 2, 1954)

Geography of USSR, Caucasus (2220)
Tr. Botan in-ta AN Arm. SSR 9, 1953, pp 101-108
 Edilyan, B. A.

Main Ways to Development of Forest Economy and to Forest Exploitation in Armenia

The forest-covered area in Armenian SSR is 273,000 hectares about 9% of the total territory. The main mass of forests is distributed in the basins of the tributaries of the Kura river, lesser forests in the southeast of the country. (RZhGeol, No 2, 1954)

Geography. Conferences (1918)
Vestn. AN Kaz. SSR, No 6, 1953, pp 101-105
 Anonymous
 Scientific Geographic Conference

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The Sector of Geography of the Academy of Sciences of Kazakh SSR, together with the Kazakh affiliate of the All-Union Geographic Society, conducted a scientific conference 26-27 May 1953 devoted to problems in the study of the geography of Kazakhstan. Reports were delivered by N. N. Pal'gov, G. G. Muravlen, A. G. Popolzin, N. F. Samokhvalov, V. Ya. Dvoskin, G. K. Konkashpayev, Ye. M. Konobritskaya, V. I. Korovin, S. P. Kavetskiy, N. N. Pal'gov, M. E. Grudinskiy, and A. T. Mashanov. (RZhGeol, No 2, 1954)

Geography of USSR, European Part (2200)
Izv. Krymskogo otd. Geogr. ob-va SSSR, No 2, 1953, pp 87-100
 Peresvetov, A. G.
 Sheep of the Karakul Breed in the Crimea

The author expounds the history of development of the Karakul sheep in the Crimea (since 1861). He characterizes the pasture, method of breeding, peculiarities, and productiveness of Crimean Karakul sheep, and indicates the changes in the sheep-raising economy. He reaches the conclusion that Crimean sheep differ from Karakul sheep of Central Asia in external appearance and constitution, and that the most favorable place for Karakul sheep is the western steppes of Crimea. (RZhGeol, No 2, 1954)

Geography of USSR, European Part (2201)
Uch. zap. Novozybkovskogo ped. in-ta, 1, 1951, pp 221-279
 Miller, N. S.
 Natural Geographic Outline of Novozybkovskiy Rayon of Bryanskaya Oblast'

The author describes the geology, hydrogeology, geomorphology, vegetation, and soil cover of Novozybkovskiy Rayon in Bryanskaya Oblast, and indicates the useful minerals that may be utilized by local industry. He distinguishes eight associations in the plant cover and gives their economic values. The productive characteristics of the soils are presented. (RZhGeol, No 2, 1954)

Geography. History (1887)
Vopr. geografii Sibiri, No 3, 1953, pp 259-274
 Skalon, V. N.
 V. V. Otlasov, the First Explorer of Kamchatka

The life and deeds of Vladimir Vasil'yevich Otlasov, better known under the name of Atlasov, one of the representative of Russian travelers and first explorer of Kamchatka. In 1697 Otlasov began his Kamchatka travels. In 1711 he died tragically. (RZhGeol, No 2, 1954)

Geography, Personalia (1910)
Vopr. geografii Sibiri, No 3, 1953, pp 5-12
 Naginskiy, N. A.
 Ninetieth Birthday of Academician Vladimir Afanas'yevich Obruchev
 [No abstract.] (RZhGeol, No 2, 1954)

General Geology, Personalia (1332)
Izv. AN Kaz. SSR, ser. geol., 124, No 17, pp 5-8
 Kunayev, D. A.
 Academician Vladimir Afanas'yevich Obruchev (On his 90th Birthday and 65th Year of Scientific Activity)

A biographical account. (RZhGeol, No 2, 1954)

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General Geology, Personalia (1353)Izv. Tomskogo Politekh. in-ta, 74, No 1, 1953, pp 3-12

Kuz'min, A. M.

Academician Vladimir Afanas'yevich Obruchev (On his 90th Birthday)

A biographical account. (RZhGeol, No 2, 1954)

General Geology, Conferences (1343)Geologichnyi zh., 13, No 3, 1953, pp 88-90 (Ukrainian)

Kondrachuk, V. Yu., and Yamnichenko, I. M.

In the Geological Section of the Spring Scientific Session of the Academy of Sciences Ukrainian SSR.

[No abstract] (RZhGeol, No 2, 1954)

Geology of Quaternary Deposits, Fauna and Flora (1449)Izv. AN Arm. SSR, biol. i s.-kh. nauki, 6, No 6, 1953, pp 87-96 (Armenian-resume)

Dal', S. K.

Mammals from the Cultural Layer in a Hill at Sardar (Kondy).

The author describes the bones of animals taken from diggings in the abode of a man dated as of the beginning of the first millenium before the present epoch; namely, domesticated goats, buffaloes, deer, cattle, horses. (RZhGeol, No 2, 1954)

Geology of Quaternary Deposits, General (1426)Byull. Komissii po izucheniyu chetvertich. perioda, No 18, 1953, pp 114-118

Ragozin, L. A., and Ivanovskiy, L. N.

First Plenum of the Commission for the Study of the Quaternary Period in Tomsk Univ.

Presented are the results of the first plenum recently organized in the city of Tomsk by the Commission for the Study of the Quaternary Period. The plenum was held in May 1953; at three sessions 12 reports were heard on the problems of quaternary geology, geomorphology, glaciology, neotectonic engineering geology, soil science (pedology), and paleoclimatology. Complex studies of the quaternary period in Western Siberia are to be undertaken as a joint effort. (RZhGeol, No 2, 1954)

Geology of Quaternary Deposits, Geochronology (1431)Byull. Komissii po izucheniyu chetvertich. perioda, No 18, 1953, pp 22-31

Yakovlev, S. A.

Correlations Among the Glacial Coverings of the Quaternary Period Which Were Originated from Scandinavian, Novaya Zemlyan, and Ural Centers of Glaciation

The author considers the correlations that exist among the Scandinavian, Novaya Zemlyan, and Ural glaciers for the early and middle quaternary epochs on the basis of a study of the marine deposits and distribution of the guiding detritus. He concludes that at the time of the early glaciation in Europe there existed simultaneously Novaya Zemlyan and Scandinavian glaciers, of which the Novaya Zemlyan was considerably larger. (RZhGeol, No 2, 1954)

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Geology of Quaternary Deposits, Loess (1940)
 Izv. AN Kaz. SSR, ser. geol., No 17, 1953, pp 46-76 (Kazakhstani resume)
 Ionenovich, M. I.
 Origin of the Loess of Zailiyskiy Ala-Tau

The loess of Zailiyskiy Ala-Tau is a friable (porous) aggregate of fine grains of quartz, feldspar, micas, and hornblende, weakly cemented by calcium carbonate with admixtures of iron hydroxides. (RZhGeol, No 2, 1954)

Hydrogeology. Chemism of Underground Waters (1947)
 Izv. AN Azerb. SSR, No 10, 1953, 43-48 (Azerbaijdzhan resume)
 Davydov, I. Ya.

Use of Empirical Curves to Determine the Composition of Salts in Ground Waters According to One Component

The author considers the possibility of establishing the dependence of the chemical composition of ground waters upon their total mineralization according to the empirical curves of the composition of waters in such large-scale regions as Kura-Araks lowlands, Vakhsha river valley, Kulunda Steppe, etc. He concludes that such a method cannot be recommended for such vast regions, since regions 1000-2000 km² in area can be distinguished that differ greatly. (RZhGeol, No 2, 1954)

Hydrogeology. Chemism of Underground Waters (1948)
 Materialy po inzh. geologii, No 3, 1953, 127-132
 Rabinovich, K. F.

Influence of Chemical Composition of Water Upon the Deformation of Some Loess-Type Grounds

The author investigates the loess-type grounds from Central Asia taken at a depth of 2 m. Loess from other parts of Central Asia at a depth of 2.5 m, and loess from South Siberia at a depth of 2 m. The content of the dust fraction is 69.04-66.42%, and clay fraction is 18.59-26.30%; specific weight is 1.66, 1.61, and 1.57 respectively. Compression tests were conducted in the case of wetting by distilled and well waters. (RZhGeol, No 2, 1954)

Hydrogeology. Ground Science and Mechanics of Ground (1960)
 Materialy po inzh. geologii, No 3, 1953, pp 121-124
 Oneta, N. O.

Making More Precise the Method for Approximately Evaluating the Sagging Properties of Loess-Type Rocks

By way of determination of the physicommechanical properties of loess grounds from various regions in T'ien Shan and Rudnyy Altay a method has been developed and refined for evaluating the sagging property of loess grounds, which was proposed by N. I. Kriger and Ye. V. Yemel'yanova (ibid., No 1, 1951). (RZhGeol, No 2, 1954)

Hydrogeology. Ground Science and Mechanics of Grounds (1961)
 Materialy po inzh. geologii, No 3, 1953, pp 95-107
 Kriger, N. I.

Procedure for the Engineering-Geological Study of the Sagging Property of Grounds

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Brief survey of existing methods for evaluating the sagging property of loess grounds is given. Procedures employed in practice for the engineering geological study of loess rocks are expounded in general outline. The author notes the importance of studying the geological history of loesses and the influence of contemporaneous geographical factors. He introduces a number of changes and supplements in the procedure now employed. (RZhGeol, No 2, 1954)

Hydrogeology, Ground Science and Mechanics of Grounds (1862)
Materialy po inzh. geologii, No 4, 1953, pp 136-139

Fokin, P. V.

Change in the Engineering-Geological Properties of Loesses in Connection with Passages of Worms

In the investigations of V. S. Fedotov and B. V. Pyaskovskiy in 1951-1952 of Rudnyy Altay loess they noted numerous holes made by worms and moles, some at terrace height of 20 m and depth of 20 m. The author recommends that norms and technical specifications take this fact into consideration. (RZhGeol, No 2, 1954)

Hydrogeology, Ground Science and Mechanics of Grounds (1864)
Materialy po labor. issledovaniyam merzlykh gruntov, sb. 1, 1953, pp 65-76
 Konnova, O. S.
 Procedure for Determining the Heat Capacity of Frozen Grounds

Using a model of a calorimeter built in the Central Laboratory of the Institute of Permafrost of the USSR [Institut Merzlotovedeniya AN SSSR], the author experimentally determined the heat capacities of a ground skeleton [skeleton grunta] for quartz sand, covering loam (clayey soil), and bentonite clay, the heat capacities of unfrozen water in covering loam, and also the heat capacities of frozen sand and loam from -39° to -11°.

(RZhGeol, No 2, 1954)

Hydrology of Land, Applied Hydrology (2119)
Gidrotekhn. str-vo, No 8, 1953, pp 39, 40
 Kryzhanovskaya, A. B.
 Long-Range Forecast of Yearly Runoff

[No abstract.] (RZhGeol, No 2, 1954)

Hydrology of Land, Applied Hydrology (2121)
Gidrotekhn. str-vo, No 2, 1953, pp 38-41
 Boldakov, Ye. V.
 Revision of State Standard GOST 3999-48 According to the Determination of the Maximum Discharges of Rivers

The problem of the determination of the maximum discharges of rivers has not received satisfactory solution up to the present time. Application of the method of mathematical statistics and binomial curve presently hinder comprehension of the phenomenon and development of a genetical-statistical method. In order to determine the computed discharges one assumes the construction of the probability curve taking into account various discharges: max-min, max, min, etc. (RZhGeol, No 2, 1954)

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Hydrology of Land, Applied Hydrology (2123)
Gidrokhim. Materialy, 20 1953, pp 23-34

Klyuyevskiy, F. M.

Conditions for the Rational Exploitation of Ponds

Considered are the changes in the qualities of waters in ponds under the influence of agricultural actions of man. Rules are expounded for the establishment and rational exploitation of ponds. Measures are presented for the improvement of the quality of water in ponds. Technical errors in the foundations of ponds in the southern European parts of the USSR over a 35-40 year period have resulted in deterioration relative to mineralization, vitiating further exploitation and the springtime exCHANGE of the water in ponds. (RZhGeol, No 2, 1954)

Hydrology of Land, Lakes (2107)

Tr. Labor. Ozerovedeniya AN SSSR, 2, 1953, pp 17-67

Bergman, A. G., Valyashko, M. G., and Feygel'son, I. B.

Salt Lakes of Northwestern Priaral' Region, Ustyurt Plateau, and Lower Amu-Dar'ya

The results of an exploitation, conducted in 1938, of the indicated lakes. Description is given of a large number of salt lakes and of their chemical composition. The main conclusion is that the evaporation is so high in consequence of the dry climate of the region that all the lakes could become dry. The authors claim that the investigated regions are favorable for the development of a salt industry. (RZhGeol, No 2, 1954)

Hydrology of Land, Lakes (2115)

Gidrokhim. material, 20, 1953, pp 35-45

Druzhinin, I. G.

Hydrochemical Characteristics of the Surface and Ground Waters in the Region of Lake Ebeyta

According to the composition (content of dissolved salts and their general concentration), the surface and ground waters in the region of the sulfate Lake Ebeyta (in Omskaya Oblast) are quite diverse. In the case of increased mineralization the predominant chemicals are chlorides and sulfates of sodium. The mineral and water supply of the lake is due to the ground waters and periodically (in the spring and rainy season) to surface waters. (RZhGeol, No 2, 1954)

Hydrology of Land, Rivers (2090)

Izv. In-ta gidrol. i gidrotekhniki AN USSR, 10 (17), 1953, pp 93-106

Shvets, G. I.

Minimum Discharges of the River Dnepr

The minimum annual discharges of water according to data for 125 years (since 1638) in the portion from Lotsmano-Kamenka to Berislav have been decreasing in average years (according to quantity of precipitations) by about 25 m³/sec, and in especially dry years by 50-70 m³/sec. Such a decrease the author ascribes to evaporation losses and transpiration promoted by climatic conditions and by the presence in the Dnepr valley of tremendous areas of plains covered with profuse vegetation. (RZhGeol, No 2, 1954)

Hydrology of Land, Rivers (2098)

Izv. In-ta gidrol. i gidrotekhniki AN USSR, 10 (17), 1953, pp 107-111

Kryzhanovskaya, A. B.

Determining the Corrections in the Levels of the Mean Flow of the Dnepr on Re-Forming the River Bed

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Presented are the results of determining the dimensions of the deformation of the Dnepr river bed near the water-gauge stations in Kiev, Kremenchug and Verkhne-Dneprovsk for the period 1927-1950. A relation is established between the level at Dnepr and the corresponding level at Lotsmanskaya Kamenka, where the river bed is sufficiently stable. The degree of deformation of the Dnepr river bed is determined from the levels. (RZhGeol, No 2, 1954)

Hydrology of Land, Rivers (2100)
 Gidrokhim. materialy, 20, 1953, pp 22-28
 Skopintsev, B. A.

More on the Volga's Subglacial Hydrochemical Regime in the Winter of 1939

[No abstract.] (RZhGeol, No 2, 1954)

Hydrology of Land, Rivers (2101)
 Gidrokhim. materialy, 20, 1953, pp 18-21
 Zenin, A. A., and Kononov, G. S.

Content of Arsenic, Boron, Bromine, Iodine, and Fluoride in the Water of the Kubana River

Determined are the content of As, B, F and the general content of Br, I in the water of the Kubana river near Krasnodar. For comparison, use is made of similar data on the water of the Don river near Rostov. Computed quantities of the indicated microelements emptied into the Azov Sea by each of the named rivers are presented. (RZhGeol, No 2, 1954)

Mineralogy, Oxides (1590)
 Geologichnyi zh., 13, No 1, 1953, pp 29-38 (Ukrainian)
 Litvinenko, A. U.

Mineralogy of Hydrates of Iron Oxide from the Kimmeridgian Strata of Priazov Region

In the Kimmeridgian ferrous strata of Priazov region of the main mass of iron-oxide hydrates is represented by hydrogoethite, an insignificant amount of limonitic ochres, and a negligible amount of goethite and hydrohematite. The hydrogoethite is observed in the form of oolites, pisolites, coarse concretions and sinter aggregates. Its separation has taken place over a long period of time. (RZhGeol, No 2, 1954)

Mineralogy, Silicates (1607)
 Geologichnyi zh., 13, No 1, 1953, pp 63-65 (Ukrainian)
 Khatuntseva, A. Ya.

Certain Cases of High-Temperature Substitutions of Cordierite

D. S. Dorzhinskiy established in the rocks of the archaic complex of Southern Kaikal region cases of the substitution of cordierite by sillimanite, which takes place on account of interaction with orthoclase. The concretion of both minerals is observed during the study of the sillimanite-cordierite gneisses of the archaic metamorphic complexes of the Ukrainian crystalline massif. Evidently, the substitution occurred under the influence of solutions of calcium salts and high temperatures at the end of the stage of crystallization of cordierite. (RZhGeol, No 2, 1954)

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Mineralogy, Silicates (1629)Geologichnyi zh., 13, No 2, 1953, pp 45-57 (Ukrainian)Mineral Composition of Certain Clays and Clayey Rocks of Ukrainian SSR

In the various types of clays and clayey rocks of Ukrainian SSR, besides the familiar minerals (kaolinite, macrite, galloisite, chasovrite, montmorillonite, glauconite, hydromica, sericite, pyrophyllite, chlorite) are distinguished clayey minerals that differ sharply in their composition, structure and physicochemical properties from the familiar ones. They contain, besides silica and alumina with water, also iron, magnesium and alkalies. For these the author proposes the name "glinite" ["clayite"]. (RZhGeol, No 2, 1954)

Mineralogy, Silicates (1630)Tr. In-ta geologii Kirizskogo fil. AN SSSR, No 4, 1953, pp 59-61

Vakhrushev, V. A.

Mineralogy of the Old Lake Marlaceous Clays of Issyk-Kul'

The old lake marly clays of the western part of the Issyk-Kul' basin in the region of the Boamskoye ravine are mixed to the extent of 77-87% with particles of beydellite (less than 0.01 mm), 11-22% with particles of quartz, feldspar and mica (size of particles 0.01-0.05 mm), and with carbonates. (RZhGeol, No 2, 1954)

Mineralogy, Silicates (1633)Izv. Tomskogo politekhn. in-ta, 74, No 1, 1953, pp 47-107

Kuz'min, A. M.

Microcline

A detailed critical survey of the literature on microcline and on alkaline feldspars is given. On the basis of the conducted survey the author does not consider microcline to be an independent mineral but treats it as an accumulation (parallel and lattice-parallel) of a large number of plates of orthoclase, anorthoclase and agyroclase. Expanding the concept of the metamict state as a state transitional between polymorphic differences, the author considers that microcline is found in the metamict state. (RZhGeol, No 2, 1954)

Sedimentary Formation and Lithology, Breccia (1486)Tr. Labor. geologii dokembriya, No 2, 1953, pp 98-101

Karlova, N. N.

Signs of Ripples in Ovruch Quartzites

Ovruch quartzites, as indicated by a detailed study of the signs of ripples, were formed either in a basin with underwater currents or in a water stream. The large degree of metamorphization of these rocks testifies to their Pre-Cambrian age. (RZhGeol, No 2, 1954)

Sedimentary Formation and Lithology, Methods of Study (1474)Tr. In-ta geologii AN Uzb. SSR, 9, 1953, pp 91-108

Babayev, A. G.

Procedures for Investigating Sedimentary Formations and Rocks in Connection with the Development of the Zonality and Periodicity of Sedimentary Accumulation

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The author treats the complex of field and laboratory investigations which is necessary to solve the problems of the essential composition and genesis of sedimentary rocks making up a definite formation. Attention is called to the study of the rhythmicity and zonality of the sedimentary formations. (RZhGeol, No 2, 1954)

Sedimentary Formation and Lithology, Regional Lithology (1500)
Dokl. AN Uzb. SSR, No 12, 1953, pp 13-17 (Uzbekistan resume)
Babayev, A. G.

Certain Peculiarities of the Real Composition of the Cretaceous Deposits of the Lower Reaches of the Amu-Dar'ya

[No abstract given in the original.] (RZhGeol, No 2, 1954)

Sedimentary Formation and Lithology, Silstone-Clay Rocks (1492)
Dokl. AN Uzb. SSR, No 9, 1953, pp 16-21 (Uzbekistan resume)
Rozhdestvenskiy, Ye. D.

Group Composition of Colloidal Slimy Particles of Loess-Like Grounds and Their Significance

The method of fractional peptization is used to study three specimens of loess-like grounds and one bentonite clay. Three groups of colloids are isolated: 0, I, II (colloids peptized by water or caustic soda after separation of free electrolytes of treatment with HCl). (RZhGeol, No 2, 1954)

Stratigraphy and Paleontology, Cretaceous (1403)
Vestsi AN BSSR, No 5, 1953, pp 130-143 (Belorussian)
Akimets, V. S.

Some New Data on the Stratigraphy of the Upper Cretaceous in the Loyevskiy Rayon of the Belorussian SSR on the Basis of a Study of Foraminiferal Fauna

A short history of the study of Cretaceous deposits in the territory of Belorussia is given. It is indicated that the Upper Cretaceous deposits which are distributed everywhere in Loyevskiy Rayon were created in two strata, according to lithological indications there. The upper and lower strata are described. (RZhGeol, No 2, 1954)

Stratigraphy and Paleontology, Cretaceous (1403)
Izv. AN BSSR, No 5, 1953, pp 135-148 (Russian)
Akimets, V. S.

Some New Data on the Stratigraphy of the Upper Cretaceous in the Loyevskiy Rayon of the Belorussian SSR on the Basis of a Study of Foraminiferal Fauna

[See preceding for abstract. Izv. AN BSSR is the Russian-language version of the Belorussian Vestsi AN BSSR.] (RZhGeol, No 2, 1954)

Stratigraphy and Paleontology, Neogene (1413)
Izv. AN Azerb. SSR, No 8, 1953, pp 45-62 (resume in Azerbaydzhani)
Salayev, S. G.

History of the Geological Development of Southern Kobystan in the Oligocene-Miocene Epoch

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The author presents a brief description of the cross section and characteristics of the lithological variations of the Lower and Upper Maikop, Tarkhan horizon, Chokark, Karagan, Konka, Sarmat and Meotis of Southern Kobystan (Azerbaydzhan SSR). He concludes that favorable conditions for petroleum formations existed in the course of the Oligocene-Miocene in Southern Kobystan. (RZhGeol, No 2, 1954)

Stratigraphy and Paleontology, Meogene (1416)
Izv. AN Kaz, SSR, ser. geol., 124, No 17, 1953, pp 131-143 (Kazakhstani resume)

Barbashinova, V. N., and Pigulevskiy, N. A.
Pollen of Southern Flora in the Tertiary Deposits in the Northern T'ien Shan

The author presents schematically the separation of the sedimentary layers of the Neogene (from the Upper Oligocene to the upper half of the Upper Pliocene) in the Northern T'ien Shan depressions. He distinguishes ten stages of sedimentary accumulation corresponding to ten strata, the apex of which are definitely established. (RZhGeol, No 2, 1954)

Stratigraphy and Paleontology, Paleogene (1407)
Izv. Krymskogo otd. Geogr. ob-va Soyuzs SSR, No 2, 1953, pp 13-17
Poznyshchev, V. V.

Nummulites on the Northern Slope of the Crimean Mountains

Information on the structure of the shell of nummulites, their ecology, geographic distribution and history of development during geological time is briefly presented. The author points out the value of nummulites as rock-forming organisms. He enumerates the main indications of nummulites that are essential for the determination of species. Certain procedures for handling them are given. Most characteristic of the middle Eocene of the Crimea is the nummulite species *Nummulites distans* Desh. (RZhGeol, No 2, 1954)

Tectonics, Structural Geology (1458)
Geologichesk. Zh., 13, No 3, 1953, pp 84-87 (Ukrainian)
Tokhtuyev, G. V.

Morphological Peculiarities of the Tectonic Delenticulation of the Rocks in the Northern Part of Saksagan Zone

The Pre-Cambrian rocks of the northern part of Saksagan zone are characterized by various manifold coarse and fine structural forms. Most interesting are the fine forms, which the author calls deformed spheres or spheroidal lenses. These deformations are most often encountered in two lithological types of rocks: quartz-sericite schists with seams of oreless hornstone, and chlorite schists with seams of ferrous hornstone. (RZhGeol, No 2, 1954)

Tectonics, Structural Geology (1459)
Dokl. AN Azerb. SSR, 9, No 7, 1953, pp 391-395 (Azerbaydzhani resume)
Agabekov, M. G.

Examples of "Secondary" Folding in Western Azerbaydzhan and Their Practical Significance

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A description is given of the secondard local folds in the northeastern wing of the Akhtakhtatap anticlinal and in the northern wing of the Eylaroyuga anticlinal in the region between the rivers Kura and Iora. The folds were formed as a result of gravitational slipping of washed-out layers of Sarmatian stage. The author polemizes with V. V. Bronguleyev. (RZhGeol, No 2, 1954)

Tectonics, Structural Geology (1464)

Izv. AN Kaz. SSR, ser. geol., 212, No 16, 1953, pp 92-97 (Kazakhstani resume)
Sydykov, Zh.

Indications of the presence of Salt-Dome Structures in the Right-Bank Side of the Ural River

New data collected on the right bank area of the Ural river indicate that salt domes of the Emba type are located in this region. Combustible gas containing admixture of hydrogen sulfide has been observed in the Abugalisor portion of this region. (RZhGeol, No 2, 1954)

Tectonics, Structural Geology (1466)

Izv. AN Kaz. SSR, ser. geol., 124, No 17, 1953, pp 162-165 (Kazakhstani resume)
Bok, I. I., Mnushkin, L. B., and Khayrutdinov, D. Kh.
Problem of the Tectonics of Mineral Structures on Mangyshlak Peninsula

The Karatau massif (fundamental structural unit of Mangyshlak) was first exposed above sea level toward the end of the Triassic, when the main fold was created. The rocks of the Karatau complex (Permian and Triassic ages) are considerably metamorphized, gathered into folds, often inverted, and complicated with overthrusts and faults. (RZhGeol, No 2, 1954)

Tectonics, Structural Geology (1467)

Dokl. AN Azerb. SSR, 9, No 10, 1953, pp 597-603
Astvatsaturov, S. A.

Problem of the Tectonics of the Eastern Part of the Region Between the Rivers Kura and Iora

The tectonics of the region between the rivers Kura and Iora is characterized by a number of anticlinal zones with a Caucasus course and in places with a latitudinal strike. All the anticlinals possess sharply asymmetrical structure. In the rocks of the Miocene which form the nuclei of the anticlinal are observed only northeast wings with angles of fall of 40-70° and southwest wings of the same fold. (RZhGeol, No 2, 1954)

Tectonics, Theories and Hypotheses (1457)

Izv. AN Kaz. SSR, ser. geol., 124, No 17, 1953, pp 133-156 (Kazakhstani resume)

Kazanli, D. N.

Problem of the Mechanism Governing the Formation of Mountains

In the region of the T'ien Shan, Caucasus, and other mountain chains of Asia the amplitude of upheavals during the upper tertiary epoch did not exceed 1500-2000 meters, whereas upheavals of more than 2000 meters occurred during the quaternary. In the authors opinion, the work of upheaval against the force of gravity determines the entire dynamics of the process. (RZhGeol, No 2, 1954)

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Physical Geography and Meteorology-Climatology, Climate (2059)
Tr. Kazakhskogo n.-n. gidrometeorol. in-ta, No 1, 1953, pp 5-54
 Uteshev, A. S.

Atmospheric Droughts in the Northern Half of Kazakhstan

On the basis of a critical analysis of contemporary methods for investigating drought phenomena in nature an attempt is made to create a unique method suitable for determining and analyzing the regime of atmospheric droughts in various geographic zones. An atmospheric drought is considered as a meteorological phenomenon characterized by the relation of heat and moisture. The author considers the frequency and probability of dry days from April to October in the northern half of Kazakhstan according to certain criteria (humidity, heat, etc.) (RZhGeol, No 2, 1954)

Vulcanology, Regional Vulcanology (1512)
Tr. Labor. vulkanol. AN SSSR, No 7, 1953, pp 137-165
 Vlodayets, V. I., and Shavrova, N. N.
 Mount Kabardzhin

Mount Kabardzhin, in the Kazbek volcanic region, is a complex volcanic structure in which the eastern part represents an extrusive formation and the western a stratification of lavas and pyroclastic rocks, but the central part (the former canal of the volcano) represents a chaotic packing of aciculate spear-shaped craggy rocks mixed with volcanic tufa. Mount Kabardzhin and all the other young volcanoes tend to be distributed along meridional lines, i. e. in a direction cutting the tectonic lines of the Main Caucasus Chain. (RZhGeol No 2, 1954)

Vulcanology, Volcanic Activity (1504)
Byull. Volkanolog. stantsii, No 19, 1953, pp 14-31
 Gorshkov, G. S.

Seismic Observations in the Village of Klyucha (From 28 August to December 1948)

October 20th saw the beginning of a series of local earthquakes that continued up to the end of the year, 1953. Up to the 9th of November a total of 249 shocks were noted, and up to 14th of December a total of 259. The depth of the hypocenter was about 16 km, and the epicentral distance was 11.5 km; coordinates of the epicenter: $56^{\circ}13' N$ lat, $160^{\circ}51' E$ long, i.e., on the tectonic line connecting the volcanoes Klyuchevskaya and Shiveluch. (RZhGeol, No 2, 1954)

IV. MATHEMATICS

Differential Equations, Applications to Physics, Technology and Natural Science (5128)
Inzh. sb., Vol 18, 1954, pp 149-152
 Gopp, Yu. A.

Linearization of Positional Force by the Method of Fragmentary-Linear Approximations

A method is offered for the approximate calculation of the frequency of oscillation in the solution of the equation $\ddot{x} + F(x) = 0$. The method is based on the fact that the curve $y = F(x)$ is changed in a suitable manner by the chosen straight line segments. (RZhMat, No 10, 1954)

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Differential Equations, Ordinary Differential Equations (5118)
Dokl. AN Uzb. SSR, No 11, 1953, pp 3-7 (Uzbek resume)
Shul'gin, M. F.
 Generalization of Poisson's Theorem for Any System of Differential Equations

With the aid of Liouville's expansion a system which is conjugate with equations in variations is joined to a given system of ordinary differential equations. A theorem is proved which generalizes Buhl's theorem, and which permits the construction by a known method of the integral of the given system in one of its integrals and an integral of the expanded system. (RZhMat, No 10, 1954)

Geometry, Applications of Geometry (5218)
Dokl. AN Uzb. SSR, No 1, 1954, pp 3-8 (Uzbek resume)
Buzin, Ye. I.

Tensions in a Surface Described by a Moving Circle Perpendicular to the Line of Centers and in Equilibrium Under the Action of Constant Internal Forces of Pressure

The equation of the surface described in the title is derived. Using the well known equations of equilibrium of a flexible nontensile surface, the author derives formulas expressing the tensions. In particular the tensions of the surface of a torus are derived. (RZhMat, No 10, 1954)

Geometry, Geometry of n-Dimensional Space (5245)
Dopovidi AN URSR, No 6, 1953, pp 387, 388 (Ukrainian; Russian resume)
Parasyuk, O. S.
 Ergodicity of Geodesic Streams on Several Three-Dimensional Manifolds of Variable Negative Curvature

Examines a class of three-dimensional Riemann spaces of variable negative curvatures and proves that for definite conditions a geodesic stream in spaces of this class is ergodic. (RZhMat, No 10, 1954)

Numerical and Graphical Methods (5257)
Vychisl. matem. i vychisl. tekhnika, No 1, 1953, pp 46-55
Shura-Bura, M. R.
 The Solution of a Finite-Difference Equation Approximating the Dirichlet Problem for Laplace's Equation on Electrical Networks

The article is concerned with an evaluation of the dispersion of the potential in the solution of the Dirichlet problem on an electrical network model. The conductivity between the nodes cannot always be made the same. The divergence of the conductivity from an assigned value is regarded by the author as an independent random quantity whose average value equals zero, with the dispersion equal to a constant. This divergence provokes also a divergence in the potential, together with a corresponding dispersion. (RZhMat, No 10, 1954)

Numerical and Graphical Methods (5259)
Soobshch. AN Gruz. SSR, Vol 14, No 3, 1953, pp 133-137
Mikeladze, Sh. Ye.
 Numerical Solution of Boundary Value Problems for Nonlinear Ordinary Differential Equations

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A method involving infinite series and transformations of systems of equations is developed for the numerical solution $y(x)$ of the boundary value problem $y(n) = f(x, y, y', \dots, y(n-1))$, and $G_1 =$ the sum from $m=0$ to $(n-1)$ of $a_m y(m)(0) +$ the sum from $m=0$ to $(n-1)$ of $b_m y(m)(L)$, where $i = 1, 2, \dots, n$. (RZhMat, No 10, 1954)

Numerical and Graphical Methods (5266)

Vychisl. matem. i vychisl. tekhnika, No 1, 1953, pp 90-94

Vzorova, A. I.

The Solution of a System of Linear Algebraic Equations by the Method of Yu. A. Shreyder

Gives an operational scheme for the solution of a system of linear equations $Ax = y$ by the method of orthogonalization (Shreyder, Yu. A., Dokl. An SSSR, Vol 76, No 5, 1951, pp 651-654). Offers critical comments on the method. (RZhMat, No 10, 1954)

Numerical and Graphical Methods (5268)

Vychisl. matem. i vychisl. tekhnika, No 1, 1953, pp 27-36

Ivanova, A. I.

Several Cases of L. A. Lyusternik's Cubic Formula for Regular Polygons

Using Lyusternik's general method for deriving the formulas, the author writes them out for five special cases. (RZhMat, No 10, 1954)

Numerical and Graphical Methods (5274)

Inzh. sb., Vol 15, 1953, pp 216-222

Graphical Methods for the Solutions of Integral Equations

Examines the solution of Fredholm and Volterra nonlinear integral equations with degenerate kernels. The integral equations are reduced to systems of algebraic equations whose coefficients are found graphically (RZhMat, No 10, 1954)

Theory of Functions of a Complex Variable (5106)

Vesti AN BSSR, No 5, 1953, pp 156-163 (Belorussian)

Papova, N. V.

A Differential Equation Whose Integrals Reflect the Semiplane Onto a Polygonal Region

[No abstract given.] (RZhMat, No 10, 1954)

V. PHYSICS

Electricity, Photoconductivity (11665)

Byull. Polskoy Akad. Nauk. Otd. III, No 3-4, 1953, pp 115-117

Sosnowski L. and Chmielewski, M.

Relaxation Period in Photoconductivity of Lead Selenide

The method by Gurevich, Tolstoy and Feofilov (ZhETF 20, 9, (1950)) was applied to the study of relaxation time of PbSe, but the accuracy of time measurement was improved up to ± 0.1 microsecond. The experimental curve of photoconductivity was in agreement with the theoretical. (RZhFiz, No 10, 1954)

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Molecular Physics, Liquids (10189)Sb. Statey po Obshch. Khimii, 1 1953, pp 229-233

Kovalenko, K. N. and Trifonov, N. A.

Surface Tension and Viscosity of the System Isobutyl Alcohol-Diphenol Methane

The surface tension of the system was established experimentally at 20 to 90°C. The isothermal viscosity measured by a capillary viscosimeter exhibited an anomalous shape, indicating dissociation of alcohol and of diphenol-methane molecules. (RZhFiz, No 9, 1954)

Nuclear Physics, Elementary Particles (9657)Byull. Polskoy Akad. Nauk, Otd. III, No 1-2, 1953, pp 47-49

Grinkiewicz, A. Z.

Deviation From the Quadratic Ratio of the Effective Cross Section of Pair Formation by Gamma Rays to the Atomic Number Z

See RZhFiz, 1954, 8516 (RZhFiz, No 9, 1954)

Nuclear Physics, Mesons (11212)Byull. Polskoy Akad. Nauk, Otd. III, No 5, 1953, pp 173, 174

Danysh, M.

Example of decay of a V^0 -particle Recorded on a Photographic Emulsion

A case interpreted as V^0 decay into a proton and a pi-meson was found on an Ilford G5 plate, 600 microns thick, exposed at 25 km altitude during 8.5 hrs. The life period of V^0 was found about 10-10 sec and the decay energy 35.5 $\pm$ 2 Mev which is in agreement with results obtained in Wilson chambers. (RZhFiz, No 10, 1954)

Nuclear Physics, Research Methods (9616)Vestn. AN Kazakh. SSR, No 3, 1954, pp 74-76

Takibayev, Zh. S.

New Method of Photo Measuring of Tracks of Particles in Emulsions

A method of measuring the density of grains in the track is suggested. A special microscope is used for readings. The operation of the microscope is described. (RZhFiz, No 9, 1954)

Nuclear Physics, Structure and Properties of Atomic Nuclei (9946)Byull. Polskoy Akad. Nauk, Otd. III, No 7, 1953, pp 293-296

Wielowiejska, M.

Gamma Radiation of Thd of 3.20 Mev Energy Determined by the Method of Photographic Emulsions

Gamma radiation from Thd was studied in the range over 1.67 Mev. Two tracks of recoil protons were observed from the reaction $Be^9(\gamma, n)Be^8$ with gamma ray energies responding to 2.67 and 3.19 Mev, in agreement with results by A. I. Alikhanov and V. D. Latvshv (J. Phys. USSR, 3, 263 (1940)). But the ratio of intensities was found different from those obtained by the afore-mentioned authors. (RZhFiz, No 9, 1954)

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Theoretical Physics, Classical Electrodynamics (9705)
Byull. Polskoy Akad. Nauk, Otd. III, No 3-4, 1953, pp 95-100
Infeld, L.

Electron Cloud in a Homogeneous Electric and Magnetic Field According to
Dirac's Theory

The motion of an electron cloud following equations of electrodynamics suggested by Dirac (Dirac, P.A.M., Proc.Roy.Soc., 1952, A212, 330) is analyzed. Deviation from this theory is found and according to author's previous article (RZhFiz, 1954-6911) the cloud follows Lorentz' equations. (RZhFiz, No 9, 1954)

Theoretical Physics, Quantum Theory (11077)
Byull. Polskoy Akad. Nauk, Otd. III, No 7, 1953, pp 281-285
Verle, I.

"Equivalent" Potentials in Classical Equations of Motion

Changed (equivalent) potentials are found for nonrelativistic classical equations of motion of a particle in a specified meson or electrostatic external field. Reduction of relativistic effects to classical equations is facilitated. (RZhFiz, No 10, 1954)

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